Complete Summary

GUIDELINE TITLE

COPD management in the long-term care setting.

BIBLIOGRAPHIC SOURCE(S)

American Medical Directors Association (AMDA). COPD management in the long-term care setting. Columbia (MD): American Medical Directors Association (AMDA); 2003. 32 p. [15 references]

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Chronic Obstructive Pulmonary Disease (COPD)

GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Prevention
Risk Assessment
Screening
Treatment

CLINICAL SPECIALTY

Family Practice
Geriatrics

Internal Medicine
Pulmonary Medicine

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Dietitians
Health Care Providers
Nurses
Occupational Therapists
Patients
Pharmacists
Physical Therapists
Physicians
Respiratory Care Practitioners
Social Workers
Speech-Language Pathologists

GUIDELINE OBJECTIVE(S)

- To improve the quality of care for patients with chronic obstructive pulmonary disease (COPD) in the long-term care settings
- To guide care decisions and to define roles and responsibilities of appropriate care staff

TARGET POPULATION

Elderly residents of long-term care facilities with chronic obstructive pulmonary disease (COPD)

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis/Assessment

1. Screening newly admitted patient for chronic obstructive pulmonary disease (COPD) and risk factors for COPD
2. Differential diagnosis
    - Assessing symptoms and physical signs
    - Medical history
    - Physical examination
    - Laboratory testing, including chest x-ray, complete blood count, chemistry profile, electrocardiogram, pulse oximetry
3. Assessing and classifying the severity of COPD (Stage 1, 2, or 3)
4. Assessing the stability of the patient's COPD
5. Obtaining input from all members of the interdisciplinary team
6. Assessing the patient's functional status
7. Written summarization of the patient's condition

Management/Treatment

1. Developing an individualized care plan and defining treatment goals
2. Implementing facility-wide programs and policies to encourage smoking cessation
3. Nonpharmacologic interventions, including patient education, nutrition, and exercise
4. Prescribing supplemental oxygen therapy if appropriate
5. Ensuring that the patient is protected against respiratory tract infections through pneumococcal and influenza vaccinations
6. Pharmacologic interventions
    - Anticholinergic (Ipratropium bromide)
    - Short-acting beta-2 agonist for rescue PRN (albuterol, levalbuterol, pirbuterol)
    - Long-acting beta-2 agonist (formoterol, salmeterol)
    - Long-acting theophylline
    - Corticosteroids (oral: prednisone, prednisolone, cortisone acetate, methylprednisolone, triamcinolone; inhaled: beclomethasone dipropionate metered-dose inhaler [MDI], triamcinolone acetonide MDI, flunisolide MDI, fluticasone MDI)
    - Diuretics
    - Antibiotics
    - Combinations of pharmacologic therapies
7. Managing comorbidities and complications associated with COPD
8. Evaluating patient's condition for end-stage and providing palliative end-stage care if appropriate
9. Monitoring patient
    - Symptoms and functional ability
    - Appearance or progression of comorbidities and complications
    - Facility's management of COPD

MAJOR OUTCOMES CONSIDERED

- Overall morbidity and mortality associated with chronic obstructive pulmonary disease (COPD)
- Patient quality of life
- Lung damage and lung function
- Severity and frequency of acute exacerbations of COPD
- Prevalence of smoking
- Symptom control and patient perception of symptom control
- Patient function in activities of daily living (ADLs) and participation in social activities.
- Exercise tolerance
- Patient levels of anxiety and depression
- Use of oxygen therapy and medications to treat COPD
- Adverse effects of medication
- Resource utilization and patient care costs
- Rates of viral and bacterial infections in COPD patients
- Frequency of hospital transfers in acute exacerbations of COPD

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review
Review of Published Meta-Analyses

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

The guideline was developed by an interdisciplinary work group using a process that combined evidence- and consensus-based thinking. The groups were composed of practitioners involved in patient care in the institutional setting. Using pertinent articles and information and a draft outline, the group worked to make a simple, user-friendly guideline that focused on application in the long-term care institutional setting.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

The use of ipratropium bromide is associated with a lower rate of exacerbations, resulting in lower total treatment costs and improved cost-effectiveness.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

All American Medical Director Association (AMDA) clinical practice guidelines undergo external review. The draft guideline is sent to approximately 175+ reviewers. These reviewers include American Medical Director Association physician members and independent physicians, specialists, and organizations that are knowledgeable of the guideline topic and the long-term care setting.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The algorithm Chronic Obstructive Pulmonary Disease (COPD) in the long-term care setting is to be used in conjunction with the clinical practice guideline. The numbers next to the different components of the algorithm correspond with the steps in the text. Refer to the "Guideline Availability" field for information on obtaining the full text guideline.

CLINICAL ALGORITHM(S)

An algorithm is provided for Chronic Obstructive Pulmonary Disease.

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The guideline was developed by an interdisciplinary work group using a process that combined evidence- and consensus-based thinking.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

The recommendations in this clinical practice guideline can assist long-term care facilities in the optimal management of chronic obstructive pulmonary disease (COPD).

In addition, guideline implementation can help ameliorate patients´ symptoms of the disease and significantly improve patients´ quality of life. For example, regardless of age, individuals who stop smoking have better pulmonary function and slower rates of functional decline than those who continue to smoke.

Outcomes that may be expected from the implementation of this guideline include the following:

- Earlier identification and better differential diagnosis of COPD
- Better awareness and understanding of the disease among both affected patients and their caregivers
- Decreased prevalence of smoking
- Better symptom control and improved patient perception of symptom control for individuals with COPD
- Increased patient function in activities of daily living (ADLs) and participation in social activities
- Decreased anxiety and depression caused by shortness of breath and other COPD symptoms
- More appropriate use of oxygen therapy and medications to treat COPD, resulting in improved resource utilization and decreased patient care costs
- Reduction in rates of viral and bacterial infections in COPD patients
- Reduction in the frequency of hospital transfers in acute exacerbations of COPD
- Better understanding of when and how to initiate palliative care
- Enhanced comfort care for patients with end-stage COPD

POTENTIAL HARMS

Side effects of medications:

- Beta-2 agonists may cause systemic side effects such as tremor, tachycardia, and arrhythmia. Salmeterol must be taken only as prescribed and never used as a rescue medication. Practitioners should be aware that in August 2003 a warning was added to the salmeterol product label after a large placebo-controlled study showed a small but significant increase in asthma-related deaths among patients who received salmeterol as compared with those who received a placebo.
- Theophylline Multiple drug interactions and variable clearance rates in elderly patients increase the potential for adverse effects, including nausea, tremor, and tachycardia, at therapeutic doses.
- Corticosteroids. Corticosteroids have potentially severe complications, such as glaucoma, cataract formation, drug-induced diabetes, osteoporosis, and steroid-induced myopathy.

Subgroups Most Likely to be Harmed

- Subgroup analyses suggested that the risk may be greater in African-American patients than in Caucasians. The relevance of this finding to elderly patients receiving salmeterol for treatment of chronic obstructive pulmonary disease (COPD) is unknown.

CONTRAINDICATIONS

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Antitussives. Cough, although sometimes a troublesome symptom in COPD, has a significant protective role. For this reason, regular use of antitussives in stable COPD is contraindicated.

Beta blockers. Beta blockers may produce bronchospasm in patients with airway disease and may be relatively contraindicated. However, beta blockers do not negatively affect the action of ipratropium.

Diuretics. Routine administration of diuretics to patients with COPD is not warranted. Diuretics may pose particular risks for patients with COPD and should be prescribed with caution. Hypokalemia may occur when beta-2 agonist treatment is combined with thiazide diuretics. Overuse of diuretics may produce excessive volume depletion.

Mucolytics. Widespread or routine use of these agents to treat COPD is not recommended. Although they may be helpful in a few patients with viscous sputum, evidence suggests that overall they are of minimal benefit in patients with COPD.

Narcotics. Narcotics should be used cautiously in treating individuals with more advanced COPD because of their respiratory depressant effects. Studies suggest that the use of morphine to control dyspnea may have serious adverse effects, with benefits limited to a few sensitive subjects. Narcotics may be appropriate, however, to provide comfort care to the end-stage patient with severe dyspnea. Narcotics should be used with caution to treat pain in patients with significant COPD.

Respiratory stimulants. Current evidence does not support the use of respiratory stimulants in stable COPD. In large clinical trials, almitrine bismethylate was associated with several significant side effects, particularly peripheral neuropathy. There is no evidence that it improves survival or quality of life. Doxapram, a nonspecific respiratory stimulant, is also not recommended in stable COPD.

Vasodilators. Studies of inhaled nitric oxide to treat pulmonary hypertension in COPD have produced disappointing results. On the basis of current evidence, inhaled nitric oxide is contraindicated in COPD because it may worsen gas exchange.

Other Medications Contraindicated In COPD

Other medications that are contraindicated in patients with COPD include the following: antihistamines, which promote drying, and sedatives, which depress respiratory drive, and ephedrine, an ingredient in many over-the-counter medications.

QUALIFYING STATEMENTS

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- This clinical practice guideline is provided for discussion and educational purposes only and should not be used or in any way relied upon without consultation with and supervision of a qualified physician based on the case history and medical condition of a particular patient. The American Medical Directors Association and the American Health Care Association, their heirs,

executors, administrators, successors, and assigns hereby disclaim any and all liability for damages of whatever kind resulting from the use, negligent or otherwise, of this clinical practice guideline.
- The utilization of the American Medical Director Association´s Clinical Practice Guideline does not preclude compliance with State and Federal regulation as well as facility policies and procedures. They are not substitutes for the experience and judgment of clinicians and care-givers. The Clinical Practice Guidelines are not to be considered as standards of care but are developed to enhance the clinician´s ability to practice.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

The implementation of this clinical practice guideline (CPG) is outlined in four phases. Each phase presents a series of steps, which should be carried out in the process of implementing the practices presented in this guideline. Each phase is summarized below.

Recognition

- Define the area of improvement and determine if there is a CPG available for the defined area. Then evaluate the pertinence and feasibility of implementing the CPG.

Assessment

- Define the functions necessary for implementation and then educate and train staff. Assess and document performance and outcome indicators and then develop a system to measure outcomes.

Implementation

- Identify and document how each step of the CPG will be carried out and develop an implementation timetable.
- Identify individual responsible for each step of the CPG.
- Identify support systems that impact the direct care.
- Educate and train appropriate individuals in specific CPG implementation and then implement the CPG.

Monitoring

- Evaluate performance based on relevant indicators and identify areas for improvement.
- Evaluate the predefined performance measures and obtain and provide feedback.

Implementation of guidelines will be affected by resources available in the facility, including staffing, and will require the involvement of all those in the facility who have a role in patient care. In addition, those responsible for implementation should identify operational areas within the facility that would be affected by the

guideline's implementation and should seek input from staff and managers in those areas on the development of other relevant facility-specific protocols, policies, and procedures.

Sample Performance Measurement Indicators

Outcome Indicators

- Fewer hospitalizations of patients with chronic obstructive pulmonary disease (COPD)
- Increased participation by COPD patients in exercise programs
- Increased use of appropriate medications
- Reduction in rate of upper respiratory infections in patients with COPD
- Reduction in smoking rate in the facility

Process Indicators

- Evaluation of staff competencies
- Immunization policies for residents and staff (including visiting physicians)
- Increase in standing orders for treatment of acute exacerbations
- Pertinent drug regimen review by consultant pharmacist
- Presence of
    - education programs related to COPD
    - smoking cessation programs
- Restorative nursing care tailored to the needs of COPD patients
- Use of protocols for managing acute exacerbations of COPD

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

End of Life Care
Getting Better
Living with Illness
Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

American Medical Directors Association (AMDA). COPD management in the long-term care setting. Columbia (MD): American Medical Directors Association (AMDA); 2003. 32 p. [15 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2003

GUIDELINE DEVELOPER(S)

American Medical Directors Association - Professional Association

SOURCE(S) OF FUNDING

American Medical Directors Association

GUIDELINE COMMITTEE

Steering Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: None available

Print copies: Available from the American Medical Directors Association, 10480 Little Patuxent Pkwy, Suite 760, Columbia, MD 21044. Telephone: (800) 876-2632 or (410) 740-9743; Fax (410) 740-4572. Web site: www.amda.com.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Guideline implementation: clinical practice guidelines. Columbia, MD: American Medical Directors Association, 1998, 28 p.
- We care: implementing clinical practice guidelines tool kit. Columbia, MD: American Medical Directors Association, 2003.

Electronic copies: None available

Print copies: Available from the American Medical Directors Association, 10480 Little Patuxent Pkwy, Suite 760, Columbia, MD 21044. Telephone: (800) 876-2632 or (410) 740-9743; Fax (410) 740-4572. Web site: www.amda.com.

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on July 6, 2004. The information was verified by the guideline developer on August 4, 2004.

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